

## PLATTLINE<sup>TM</sup> ZINC RIBBON ANODES

# **Technical Practices Document - No. 1 Connection Practices**

## FOR PLATTLINE<sup>TM</sup> ZINC RIBBON ANODE CONNECTIONS ON:

- BURIED PIPELINES
- ABOVE GROUND STORAGE TANKS
- OTHER SYSTEMS

FIGURE 1 TYPICAL ANODE RIBBON SPLICE CONNECTION



#### CONNECTION PROCEDURE

- 1. Remove 1-1/2" of zinc from iron wire core at ends of anode ribbons to be spliced.
- 2. Join two ends of iron wire cores together,
- 3. Insert iron wire core ends into cadwelder.
- 4. Open cover and place metal disk into mold pocket. Open cadweld charge No. CA-15, pour outweld metal and starting powder into mold.
- 5. Close cover and ignite powder charge with flint gun.
- 6. After weld has cooled, remove weld slag from connection.
- Wrap exposed iron wire core, weld connection and 1" of zinc anode ribbon (each end) with two half-lapped layers of rubber tape and two half-lapped layers of plastic tape.



Plattline<sup>™</sup> zinc ribbon anodes are used in a variety of applications. They are used in cathodic protection on buried pipelines, sacrifical cathodic protection of secondary bottoms on above ground storage tanks, as grounding mats for altenating current mitigiation and in other corrosion protection applications. During installation procedures of Plattline™ zinc ribbon anodes in the above applications, it is necessary to connect Plattline<sup>TM</sup> to itself and to other main cables for full electrical interconnection of current flow. These connection procedures are illustrated in this bulletin for easy reference. This guide should prove to be helpful to management and field personnel involved with the application and installation of Plattline<sup>™</sup> zinc ribbon anodes. Plattline<sup>™</sup> zinc ribbon anodes are manufactured with a steel wire core for electrical path continuity and for strength and handling of the product. This steel wire core is firmly bonded to the product.

To expose the steel wire core, melt the zinc off using a suitable torch which is capable of providing over 1000°F (Reasonable care should be excercised to insure safe operation when melting any metal). The steel wire core can be exposed using this procedure at the ends of a length of Plattline<sup>TM</sup> or in the middle of a run of Plattline<sup>TM</sup>.

The exposed core is readily connected to itself as shown in Figure 1 and to another cable as shown in Figure 2. Procedures for each connection are given with the each illustration. Plattline<sup>TM</sup> zinc ribbbon anodes come in four sizes as shown in Table 1. Each size of Plattline<sup>TM</sup> can be connected in the same fashion.

| SPECIFICATION<br>CHART                                      | $\bigcirc$                               | $\diamond$                             | $\diamond$                   | $\diamond$                                |
|---|--|--|------------------------------|---|
| Product Size  | Super                                    | Plus                                   | Standard                     | Small                                     |
| Cross Section:<br>Inches<br>Millimeters                     | 1" X 1-1/4"<br>25.4 X 31.75              | 5/8" X 7/8"<br>15.88 X 22.22           | 1/2" X 9/16"<br>12.7 X 14.28 | 11/32" X 13/32"<br>8.73 X 10.32           |
| Weight/Foot, Pounds <sup>1</sup><br>Weight/Kg., Meters      | 2.4<br>3.570                             | 1.2<br>1.785                           | 0.6<br>.8925                 | 0.25<br>.372                              |
| Diameter of wire core <sup>2</sup><br>Inches<br>Millimeters | 0.185<br>4.70                            | 0.135<br>3.43                          | 0.130 <sup>3</sup><br>3.30   | 0.115<br>2.92                             |
| Standard Coil Length: <sup>4</sup><br>Feet<br>Meters        | 100 <sup>*10</sup><br>30.5 <sup>*3</sup> | 200 <sup>+20</sup><br>61 <sup>+6</sup> | 500 +30<br>152 +9<br>152 +0  | 1000 <sup>+50</sup><br>305 <sup>+15</sup> |

**Plattline I** is an alloyed zinc product and generally used in seawater or brackish water systems. It meets the chemical requirements of MIL-A-18001K and ASTM B418-95a Type I. The Super and Plus Sizes are normally available from stock.

**Plattline II** is a high purity product and generally used in underground and fresh water systems. It meets the chemical requirements of ASTM B418-95a Type II. The Standard and Small sizes are normally available from stock. An Arctic core can be substituted in this alloy's standard size.

# FIGURE 2



#### CONNECTION PROCEDURE

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- 1. Remove 3" of zinc from iron core of anode ribbon.
- 2. Strip 3-1/2" of insulation from insulated copper cable without breaking copper stands.
- 3. Insert exposed copper cable and iron wire core into CAPTT001 cadwelder.
- 4. Open cover and place metal disk into mold pocket. Open CA25/F-33 cadweld charge, pour out weld metal and starting powder.
- 5. Close cover and ignite powder charge with flint gun.
- 6. After weld has cooled, remove weld slag from connection.
- 7. Tape exposed copper cable, weld connection and iron wire core with mastic filler tape.
- 8. Wrap entire connection, including 1" of zinc anode ribbon (each end) with two half-lapped layers of rubber tape and two half-lapped layers of plastic tape.

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